

Serial No. 10/736,561
Response to Office action of June 4, 2007

Attorney Docket No: FS-P03218-01

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (currently amended) An image-forming combined system for medical diagnosis application comprising a combination of a photothermographic material and an X-ray intensifying screen,

wherein the photothermographic material comprises: a support and, disposed on both sides of the support, image-forming layers, each of which comprises a non-photosensitive organic silver salt comprising silver behenate, a photosensitive silver halide comprising tabular grains, a binder, a bisphenol reduction agent, a color toning agent, an organic polyhalogen compound, and a silver iodide complex forming agent that, after thermal development, substantially reduces visible light absorption caused by the photosensitive silver halide;

the photosensitive silver halide ~~is in a form of~~ tabular grains ~~having~~ have an average sphere-equivalent diameter in a range from 0.3 μm to 5.0 μm and has have a silver iodide content of 90 mol% to 100 mol%;

the silver iodide complex forming agent is contained in a range from 50 to 300

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mol% relative to an amount of the photosensitive silver halide;

the silver iodide complex forming agent reduces a transition absorption of silver iodide of the photothermographic material after thermal development, which resides in the vicinity of 423 nm, to 1/2 or less than that before the thermal development; and

the photothermographic material is capable of being recorded imagewise by using the X-ray intensifying screen.

2. (cancelled)

3. (cancelled)

4. (currently amended) The ~~photothermographic material~~ image-forming combined system of claim 1, wherein at least 50%, in terms of a projected area, of the photosensitive silver halide is occupied by tabular grains having an aspect ratio of from 2 to 100.

5. (currently amended) The ~~photothermographic material~~ image-forming

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combined system of claim 1, wherein at least 50%, in terms of a projected area, of the photosensitive silver halide is occupied by tabular silver halide grains having an aspect ratio of from 2 to 50 and being deposited with a silver salt in an epitaxial growth manner.

6. (currently amended) The ~~photothermographic material~~ image-forming combined system of claim 1, wherein at least 50%, in terms of a projected area, of the photosensitive silver halide is occupied by tabular silver halide grains having an aspect ratio of from 2 to 50 and having one or more dislocation lines respectively.

7. (currently amended) The ~~photothermographic material~~ image-forming combined system of claim 1, wherein the silver iodide complex forming agent is a compound represented by one of the following formulas (1) and (2):

Formula (1)



Formula (2)



wherein, in the formula (1), Y represents a non-metallic atomic group

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necessary for forming a 5- to 7-membered heterocycle containing at least one of a nitrogen atom and a sulfur atom;

the heterocycle formed by Y may be saturated or unsaturated, or may have a substituent; and

substituents on the heterocycle formed by Y may be combined with each other to form a ring; and

wherein, in the formula (2), Z represents a hydrogen atom or a substituent;

n represents an integer of 1 or 2,

when n represents 1, S and Z are combined with each other by a double bond;

when n represents 2, S and each of two Zs are combined with each other by a single bond;

when n represents 1, Z does not represent a hydrogen atom; and

when n represents 2, two Z's may be same as, or different from, each other, but neither of the two Zs represents a hydrogen atom.

8. (currently amended) The ~~photothermographic material~~ image-forming combined system of claim 5, wherein the silver salt is silver chloride or silver bromide.

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9. (cancelled)

10. (currently amended) The ~~photothermographic material~~ image-forming combined system of claim 1, wherein the average sphere-equivalent diameter of the photosensitive silver halide is in a range from 0.4 μm to 3.0 μm .

11. (currently amended) The ~~photothermographic material~~ image-forming combined system of claim 1, further comprising at least one compound having an adsorptive group to the photosensitive silver halide and a reducing group, or a precursor thereof.

12. (currently amended) The ~~photothermographic material~~ image-forming combined system of claim 11, further comprising a compound represented by the following formula (I) as the compound having an adsorptive group and a reducing group:

Formula (I)



wherein A represents a group adsorbable to silver halide (hereinafter referred to

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simply as “adsorptive group”);

W represents a divalent linking group;

n represents 0 or 1; and

B represents a reducing group.

13. (currently amended) The ~~photothermographic material~~ image-forming combined system of claim 1, further comprising a compound in which a one-electron-oxidized form generated by an oxidizing of one electron therein can release one or more electrons.

14. (currently amended) The ~~photothermographic material~~ image-forming combined system of claim 1, further comprising a development accelerator.

15. (currently amended) The ~~photothermographic material~~ image-forming combined system of claim 1, further comprising at least one phthalic acid or a derivative thereof.

16. (cancelled)

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17. (currently amended) The image-forming combined system of claim 1,
comprising the combination of the ~~The~~ photothermographic material of claim 15, and
imagewise exposed by using an ~~the~~ X-ray intensifying screen, wherein ~~the~~
photothermographic material is recorded imagewise by exposure using the X-ray
intensifying screen, and wherein, when exposure is conducted with an exposure quantity
is in a range from 0.005 lux · second to 0.07 lux · second , that is necessary for obtaining
an image density of fog plus 0.5 after the steps of (1) exposing the photothermographic
material by using with a monochromatic light which has a having the same wavelength
as that of a ~~the~~ main luminescent emission peak wavelength of the X-ray intensifying
screen and having a half bandwidth of 15 nm±5 nm, an image density to be obtained by
and (2) thermally developing the photothermographic material and then (3) removing an
the image-forming layer provided on a side of the support opposite to an exposed face-
from the support becomes fog plus 0.5, is in a range from 0.005 lux · second to 0.07
lux · second.

18. (currently amended) The photothermographic material image-forming
combined system of claim 1, further comprising an ultraviolet ray-absorbing agent.

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19. (currently amended) The ~~photothermographic material~~ image-forming combined system of claim 1, exposed by using ~~an~~ the X-ray intensifying screen having a luminescent peak in an ultraviolet region.

20. (cancelled)

21. (new) An image-forming combined system for medical diagnosis application comprising a combination of a photothermographic material and an X-ray intensifying screen, wherein the photothermographic material comprises: a support and, disposed only on one surface of the support, an image-forming layer, which comprises a non-photosensitive organic silver salt comprising silver behenate, a photosensitive silver halide comprising tabular grains, a binder, a bisphenol reduction agent, a color toning agent, an organic polyhalogen compound, and a silver iodide complex forming agent that, after thermal development, substantially reduces visible light absorption caused by the photosensitive silver halide;

the photosensitive silver halide tabular grains have an average sphere-equivalent diameter in a range from 0.3 μm to 5.0 μm and a silver iodide content

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of 90 mol% to 100 mol%;

the silver iodide complex forming agent is contained in a range from 50 to 300 mol% relative to an amount of the photosensitive silver halide;

the silver iodide complex forming agent reduces a transition absorption of silver iodide of the photothermographic material after thermal development, which resides in the vicinity of 423 nm, to 1/2 or less than that before the thermal development;

the photothermographic material is capable of being recorded imagewise by exposure using the X-ray intensifying screen,

an exposure quantity, that is necessary for obtaining an image density of fog plus 0.5 after the steps of (1) exposing the photothermographic material with a monochromatic light having the same wavelength as the main emission peak wavelength of the X-ray intensifying screen and having a half bandwidth of $15 \text{ nm} \pm 5 \text{ nm}$ and (2) thermally developing the photothermographic material, is in a range from 0.005 lux · second to 0.07 lux · second, and

an image contrast after the thermal development is in a range from 3.0 to 5.0.